

OFFICE OF THE  
SENIOR MEDICAL OFFICER-IN-CHARGE,  
HEALTH DEPARTMENT,  
ZANZIBAR

*14th June, 1950*

SIR,

I have the honour to submit for the information of His Excellency the British Resident and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitation conditions of the Zanzibar Protectorate for the year 1949.

I have the honour to be,

Sir,

Your obedient servant,

C. R. C. RAINSFORD,  
*Senior Medical Officer-in-Charge, Health Department*

THE HONOURABLE

THE CHIEF SECRETARY TO THE GOVERNMENT, .

ZANZIBAR



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## ZANZIBAR PROTECTORATE

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# Medical and Sanitary Report

for the year ended

31st December, 1949

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### SECTION I.—ADMINISTRATION: GENERAL REVIEW

#### STAFF

There was a serious shortage of Medical Officers during the early part of the year but the staff position improved later. Dr. Balean returned from leave in May, 1949, and Dr. Jaworski on new appointment arrived in July, 1949, Dr. Rainsford, the substantive Senior Medical Officer, took over at end of August, 1949, and Dr. Robertson who was on leave from April, was back by early September, 1949. Dr. Purnell arrived in October from Northern Rhodesia to fill the vacancy (unfilled since August, 1948), for a Specialist Officer. Dr. Robertson, Pathologist, acted as Senior Medical Officer until he went on leave in April, and was succeeded by Dr. Merson.

The duties of the Specialist Officer were carried out by Dr. Merson and Dr. Young. The latter went on leave in November, 1949.

Dr. Jaworski was posted to Chake Chake, Pemba, in July, so restoring the normal complement of Medical Officers in Pemba to two.

Nursing Sisters too were in short supply. Three new sisters arrived, Miss Hardes, Miss Hebden and Miss Smith but two resigned and three were on leave. Miss Beecroft, the Matron, proceeded on leave in May, and owing to illness had not returned by the end of the year. Miss Allen acted.

One Sub-Assistant Surgeon was invalided and one Assistant Lady Medical Officer resigned. She had only seven months' service.

One Assistant Medical Officer obtained his diploma at Makerere in December, and will be appointed to our staff next year.

The Assistant Dental Surgeon, and one Assistant Medical Officer continued their studies in the United Kingdom during the year.



## DISTINGUISHED VISITORS

Dr. Pridie, C.M.G., D.S.O., O.B.E., M.B.B.S., Chief Medical Adviser to the Secretary of State for the Colonies paid us a brief visit in November, 1949.

Lieut.-General Daubenton of the World Health Organisation spent a few days in Zanzibar during May, 1949.

Sir Thomas Lloyd, Permanent Under-Secretary of State, visited the general hospital, Zanzibar, and the Mental Hospital on 12th November, 1949. He also inspected the hospital at Wete, Pemba.

## TRAINING OF NON-EUROPEAN PERSONNEL

The training of Sanitary Inspectors was continued by the European Sanitary Inspector-Teacher. Nine candidates sat for the examination of the Royal Sanitary Institute in December, 1949, conducted at Zanzibar and four passed.

The external examiner commented on the low standard of general education of some of the candidates which prevented them from absorbing their technical teaching.

The training of Nurses, Attendants and Midwives was continued with some difficulty owing to the shortage of Nursing Sisters, eight candidates presented themselves for the final (third year) examination in December, 1949, and four passed.

## HOSPITALS

## A. BUILDINGS

(1) *Mental Hospital*.—The new mental hospital at Zanzibar built from funds provided by the Colonial Development and Welfare Act was finished and opened in March, 1949.

It is a fine building of modern design with accommodation for 78 male and 53 female patients. The different types of cases are segregated in separate wards. It is already almost full to capacity.

(2) *Wete Hospital (Pemba)*.—A new ward (40 beds) and operating theatre were approaching completion by the end of the year.

## B. GENERAL

The working of the hospitals was maintained, the number of in-patients treated was 6,228 compared to 6,819 in 1948.

## DISPENSARIES

A new dispensary was opened at Konde in Pemba. Work was started on a new maternity centre at Makunduchi in the south of Zanzibar. The buildings which were nearly completed at the end of the year consist of a maternity ward of 6—8 beds, labour ward, small dispensary, ante-natal examination room and midwife's quarters.

In addition, two houses were under construction for a Sanitary Inspector and a Dispensary Attendant.

The number of patients treated in dispensaries was—

New cases ...	...	...	52,026
Re-attendances ...	...	...	139,410

#### MATERNITY AND CHILD WELFARE

These services were satisfactorily maintained there were 490 confinements in Government hospitals compared with 508 in 1948.

#### SCHOOL MEDICAL AND DENTAL SERVICES

This service was in abeyance throughout the year owing to the absence of the Assistant Dental Surgeon who was on study leave in the United Kingdom.

### SECTION II.—PUBLIC HEALTH

#### 1. RETURNS

The total number of patients seen at hospitals and dispensaries during the last five years was as follows:—

	1945	1946	1947	1948	1949
New cases ...	114,951	125,557	131,955	138,939	127,816
In-patients ...	6,246	6,643	7,257	6,819	6,228
Total attendances ...	409,127	430,331	525,473	454,236	304,687
Deaths in hospitals ...	420	504	482	376	318

The principle causes of death in Government hospitals were:—

Tuberculosis ...	16
Dysentery ...	2
Tetanus ...	7
Malaria ...	12
Pneumonia ...	47
Diseases of the blood and blood forming organs	26
Diseases of the skin, cellular tissue, bone and organs of locomotion ...	21
Ankylostomiasis ...	7
Diseases of the circulatory system ...	37

#### 2. GENERAL DISEASES

1. *Epidemic, endemic and infectious diseases.*—In this group there were 21,452 cases with 52 deaths.

2. *General diseases.*—2,746 cases were reported.

3. *Diseases of nervous system and organs of sense.*—6,548 were treated the majority 4,877 were diseases of the eye including 16 cases of trachoma.

4. *Affections of the circulatory system.*—523 cases were recorded including 423 of heart disease with 30 deaths.



5. *Affections of the respiratory system.*—In this large group of 8,642 there were 696 cases of pneumonia with 47 deaths. This compares with 909 cases and 49 deaths in 1948.

6. *Affections of the digestive system.*—There were 11,726 cases in this group including 572 of hernia.

7. *Diseases of the genito-urinary system.*—2,693 cases of non-venereal diseases of the genito-urinary system were treated.

8. *Puerperal state and diseases of infancy.*—493 cases were treated.

9. *Affections of the skin, cellular tissue and organs of locomotion.*—17,042 cases were recorded. They include tropical ulcers, septic conditions of the skin and myalgia.

10. *Affections produced by external causes.*—There were 8,891, the majority were minor injuries.

#### COMMUNICABLE DISEASES

##### (A) INSECT-BORNE

*Malaria.*—8,222 cases were recorded, of these 584 were treated as in-patients with 12 deaths. The corresponding figures for 1948 were 11,742 cases including 733 in-patients and 25 deaths.

*Blackwater.*—Three cases were treated during 1949 with no deaths.

*Relapsing fever.*—There was no case reported at the hospital.

*Plague.*—The Protectorate continues to be free from plague. The usual precautions were taken to prevent its introduction.

##### (B) INFECTIOUS DISEASES

*Small-pox.*—No cases of small-pox occurred during the year.

The following vaccinations were performed:—

Zanzibar township	...	...	17,682
Ships and dhows	...	...	346
			<hr/>
Zanzibar Island	...	...	18,028
Pemba	...	...	447
			<hr/>
Total	...	...	18,475
			<hr/>

*Tuberculosis.*—256 cases attended Government hospitals. Admissions to hospitals numbered 114 and there were 16 deaths.

There is no tuberculosis sanatorium in Zanzibar but some cases are accommodated at Walezo. Others are treated on the verandahs of the general hospital wards.

In Zanzibar township Sanitary Inspectors visit tubercular patients in their houses and advise on routine sanitation measures. Disinfectant for the treatment of infected sputum is provided free of charge.

In all cases where the patients left the Protectorate and proceeded to the mainland territories the Medical Officer of the Health of the area was informed.

The local Welfare Society was notified and gave assistance to needy cases.

*Leprosy.*—The majority of leprosy patients submit voluntarily to segregation in the leprosy settlements at Walezo (Zanzibar) or Makondeni (Pemba).

The numbers cared for was as follows:—

	<i>Walezo</i> <i>Makondeni</i>	
Remaining on 31st December, 1948	47	51
Admitted during 1949	13	12
Discharged	5	—
Died	3	8
Transferred to Walezo Institute	—	3
Remaining on 31st December, 1949	52	52

#### *Walezo*

At Walezo which is under the management of the Catholic Mission there are 62 houses mostly of temporary construction. Two houses in permanent materials were under construction.

#### *Makondeni (Pemba)*

This camp is under direct Government control and has accommodation for 92 patients, 52 were in residence.

One hospital orderly is in charge assisted by a staff of menials.

The inmates themselves are encouraged to assist in the less arduous duties about the camp and are paid for work done. Unfortunately they show little enthusiasm but some do cultivate their own gardens, growing crops of bananas, cassava, etc.

The District Medical Officer, Wete, visited the settlement once a week.

#### VITAL STATISTICS

##### *Population:—*

1948 Census	...	...	...	...	265,872
Add Births	...	...	...	6,294	...
Immigrants	...	...	...	30,846	37,140
Total				...	303,012
Deduct Deaths	...	...	...	4,362	...
Emigrants	...	...	...	30,142	34,504
Total estimated population for 1949	...	...	...	...	268,508

*Births and deaths.*—A total of 3,719 births and 2,594 deaths were recorded in Zanzibar, and 2,575 births and 1,768 deaths registered in Pemba. Birth rate 23.44 per thousand. Death rate 16.24 per thousand.



*Infantile mortality.*—376 deaths of children under one year old were registered. Infantile mortality rate 59.74 per thousand live-births.

*Still-births.*—65 still-births were registered. Still birth rate 10.3 per thousand births.

*Maternal mortality.*—32 maternal deaths were registered. Maternal mortality rate 5 per thousand.

### SECTION III.—HYGIENE AND SANITATION

#### MOSQUITO CONTROL

The usual methods for the control of mosquitoes in and around Zanzibar township were energetically pursued.

Drains, tanks and pools of standing water were oiled, earth drains and ditches were kept cleaned and some premises were sprayed with D.D.T. In addition 3,591 feet of new concrete drains were laid and 9,133 square yards of low-lying land was raised.

There was a considerable decrease in the number of anophelene and culex breeding places found in the township but an increase in that of aedes possibly due to closer inspections.

Details of the work done is given in the following tables:—

#### *Inspections of Premises:*

		Zanzibar township		Protective belt outside township
European	...	6,453	...	159
Indian	...	114,008	...	413
Arab	...	65,469	...	657
African	...	219,799	...	17,546
Others	...	35,930	...	—
Vacant houses	...	9,455	...	593
Mosques and temples	...	6,105	...	727
		<hr/> 457,219		<hr/> 20,095

#### *Other Inspections:*

		Zanzibar township		Protective belt outside township
Sullage and cesspits		171,095	...	7,502
Drains	...	17,341	...	1,672
Gully traps	...	57,439	...	1,186
Roof gutterings	...	2,754	...	211
Burrow pits	...	261	...	4,383
Swamps	...	193	...	543
Crab holes	...	80,335	...	6,794
Anti-malarial drains	...	2,431	...	2,014
Dhows on beach	...	485	...	1,297
Boats	...	1,970	...	1,239
Wells and water holes	...	1,413	...	4,745
Pools	...	1,196	...	7,733
Gardens	...	11,851	...	892
Graveyards	...	7,526	...	987
Open lands	...	15,447	...	5,476
Trees	...	8,022	...	20,492
Mosquito traps	...	129	...	—
		<hr/> 379,888		<hr/> 67,166



*Breeding Places Found:*

		<i>Zanzibar township</i>	<i>Protective belt outside township</i>
Anopheles	...	87	326
Aedes	...	2,448	77
Culex	...	333	172
		<hr/> 2,868	<hr/> 575

*Adult Mosquitoes caught in Control Stations:*

		<i>Zanzibar township</i>	<i>Protective belt outside township</i>
Anopheles	...	1	19
Aedes	...	6	156
Culex	...	4,953	1,090
		<hr/> 4,960	<hr/> 1,265
Aedes index	...	0.49	0.25

*Action Taken:*

			<i>Zanzibar township</i>	<i>Protective belt outside township</i>
Notices for abatement served	...	...	2,501	26
Prosecutions for failure to abate	...	...	31	—
Earth drains or ditches cleared and graded (linear feet)	...	...	455	503,400
New concrete anti-malarial drains laid (linear feet)	...	...	3,591	—
Low-lying land raised (square yards)	...	...	9,133	—

The following number of oilings were made:—

				<i>Zanzibar township</i>	<i>Protective belt outside township</i>
Drains	...	...	...	763	142
Tanks	...	...	...	4	1
Cesspits	...	...	...	25,199	—
Sullage pits	...	...	...	4,211	—
Swamps and pools	...	...	...	118	473
Pools or excavations filled in	...	...	...	19	—
Crab holes oiled and filled in	...	...	...	3,933	—
Crab holes found containing larvæ	...	...	...	3,777	—
Dead crabs found after being poisoned	...	...	...	1,665	—
Bush and undergrowth cleared (square yards)	...	...	...	1,720,930	782,765
Shells, coconut husks, tins, etc., removed	...	...	...	6,787	50,731
D.D.T. Briquettes used in cesspits	...	...	...	22	—
Disused wells filled in	...	...	...	2	—
Premises sprayed with D.D.T. Solution	...	...	...	537	9

ZANZIBAR PRISONS—YEARLY TOTALS OF ADULT MOSQUITO CATCHES

	FIRST OFFENDERS BLOCK			
	Wet days	Rainfall	Anopheles	Culex
1946	126	52.55	1,375	1,467
1947	139	73.11	80	752
1948	173	75.01	13	524
1949	111	36.54	12	744

ADULT MOSQUITOES CAUGHT IN SIX CONTROL STATIONS, ZANZIBAR TOWNSHIP (BOUNDARIES).

Year	(1) N. E. Boundary			(2) N. Boundary			(3) S. Boundary			(4) W. Boundary			(5) S. E. Boundary			(6) Central		
	N. E. Boundary			N. Boundary			S. Boundary			W. Boundary			S. E. Boundary			Central		
	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex	Anopheles	Aedes	Culex
1943	...	10	197	...	...	225	159	3	237	...	...	138	...	17	109	...	...	124
1944	...	5	104	...	3	80	51	1	248	...	...	157	...	7	94	...	...	119
1945	...	5	94	...	...	49	...	1	240	...	...	103	...	4	106	...	...	134
1946	...	8	100	...	15	36	6	42	127	...	...	72	...	11	48	...	...	126
1947	...	4	84	4	14	57	...	56	151	...	...	48	...	8	47	...	...	56
1948	...	4	138	...	1	178	2	36	93	...	5	32	...	4	65	...	...	38
1949	...	...	110	...	...	63	...	3	153	...	...	18	...	...	54	...	...	30

ADULT MOSQUITOES CAUGHT ON WEEKLY VISITS IN CONTROL STATIONS INSIDE ZANZIBAR TOWNSHIP

"A"			"B"			"C"			"D"			"E"			"F"		
Sanitary District			Sanitary District			Sanitary District			Sanitary District			Sanitary District			Sanitary District		
A	C	S	A	C	S	A	C	S	A	C	S	A	C	S	A	C	S
93				55			105	1		66			18			309	1

(Malaria (i.e., parasites present in blood):

Malaria (i.e., parasite present in blood):

The following are the figures for the last seven years (Zanzibar only):—

IN-PATIENTS												
1943	1944		1945		1946		1947		1948		1949	
66	...	73	...	56	...	27	...	22	...	13	...	7

OUT-PATIENTS												
99	...	90	...	64	...	41	...	38	...	33	...	12

### INFECTIOUS DISEASES

The following is a table of comparison of the infectious diseases notified in 1946, 1947, 1948, and 1949:—

	1946	1947	1948	1949
Chicken-pox ...	102	195	44	421
Cerebro-spinal meningitis	—	—	—	1
Diphtheria ...	2	5	7	4
Dysentery, amœbic ...	87	83	69	83
„ bacillary ...	23	15	38	14
Erysipelas ...	—	—	1	1
German measles ...	13	7	9	—
Leprosy ...	17	7	20	20
Measles ...	7	77	52	37
Mumps ...	16	2	4	40
Puerperal sepsis ...	—	1	1	—
Relapsing fever ...	53	3	1	2
Tetanus ...	—	—	2	—
Tuberculosis ...	101	120	125	168
Typhoid fever ...	8	9	13	12
Typhus fever ...	—	—	1	—
Undulant fever ...	—	—	1	—
Whooping cough ...	6	46	24	59

There was an epidemic of chicken-pox throughout both islands in 1949. The disease was of a mild type and no deaths were reported.

### LICENSED PREMISES

All licensed premises continued to be annually inspected before the issue of licences were recommended by the Health Office. The co-operation of the Municipal Officer has enabled this important work to be carried out.

This work involved the inspection of 107 eating houses, 37 houses-let-in-lodgings, 35 laundries, 10 bakehouses and 8 dairies.

### GENERAL MEASURES OF SANITATION

#### (a) Sewage Disposal

There is little progress to report. Nightsoil is still disposed of in septic tanks, cess-pits and pit latrines.

It is however expected that work will soon start on the scheme to construct an adequate sewage system in Zanzibar town.



*(b) Scavenging and refuse disposal*

This service is under the direct control of the Medical Officer of Health for Zanzibar township. In Pemba the District Medical Officer, Pemba, is in charge.

Most of the refuse is disposed of by controlled tippings. This system which has been in force for many years has resulted in the reclamation of a considerable area of swamp land.

In Zanzibar township all public buildings, markets, hospitals, official quarters, etc., have been supplied with British standard type dustbins, and these have proved very satisfactory.

In the African location of Ngambo 68 empty colas drums were placed at various collecting parts but many of them were stolen.

Altogether 116,636 cart-loads of refuse were removed during the year and dumped in various low-lying areas.

## CONTROL OF FLIES

Considering the density of the population in Zanzibar town and the unsatisfactory hygiene in the poorer areas it is surprising that flies are not a major menace.

Fly traps are extensively used and fly searchers are employed to detect breeding places, which are promptly dealt with.

## IMMUNISATION AGAINST YELLOW FEVER

During 1949, 3,149 people were immunised against yellow fever. Yellow fever certificates issued were in accordance with the International Sanitary Conventions. In addition 156 people were immunised in the Pemba stations.

Also 210 persons were immunised against cholera and 100 persons against typhoid before proceeding overseas.

## HOUSING AND TOWN-PLANNING, ZANZIBAR TOWNSHIP

Inspections and recommendations were made in connection with the following applications made to the Joint Building Authority.

## STONE BUILDINGS

Applications with plans :	1948	1949
Erection of new buildings ... ..	15	23
Major alterations and additions including drainage to existing buildings ... ..	104	115
Applications without plans :		
Alterations and additions ... ..	132	256
Permits refused ... ..	8	4
Notices served for unauthorised work ... ..	9	23
Notices served for dangerous structure ... ..	102	190

Ten prosecutions for dangerous structures were instituted resulting in 5 convictions, 1 withdrawal and 4 pending in court.

## NATIVE TYPE BUILDINGS

	1948	1949
Erection of new huts ... ..	166	137
Reconstruction and extension of existing huts ...	584	234
Repairs to existing huts ... ..	634	1,360
Notices served for unauthorised work ... ..	23	34
Notices served for demolition ... ..	12	6

## RUINOUS OR INSANITARY HUTS DEMOLISHED

	1948	1949
Stone Town ... ..	9	23
Ngambo ... ..	114	80

## FOODSTUFFS IN RELATION TO HEALTH AND DISEASE

All licensed premises dealing with food such as eating-houses, bake-houses, milk shops, etc., and markets were regularly inspected, and the necessary improvements effected where found necessary. One hundred and seventy notices were served in connection with these improvements.

Licensed hawkers of food were kept under strict observation, and all their utensils had to be approved and stamped by the Health Office staff before use. This work involved the checking of 215 hawkers.

One hundred and thirty-seven samples of milk were taken for analysis from the town dairies, and 106 from the milk vendors from the rural districts. In addition 22,341 lactometer tests were made at the milk depot, where milk brought from the rural districts is presented for inspection, and sealing of cans before sale.

Seventy-eight prosecutions for selling milk before the legal standard were undertaken. Out of these 16 cases were fixed for hearing in 1950. Sixty-two convictions were obtained (1 for a town dairy and 61 from rural milk vendors).

## PEMBA

## PUBLIC HEALTH IN PEMBA

This work was under the direct control of the District Medical Officer, Pemba.

*Anti-Malarial Measures and Mosquito Control.*—Little new work of a permanent nature was carried out but 6,469 trees were planted in a swampy area at Mkoani. 1,497 yards of earth drains were laid and existing drains maintained.

Records show that there was a considerable amount of mosquito breeding both of anopheles and culex in the townships of Wete, Chake and Mkoani. At the control station in these townships the following numbers of mosquitoes were caught:—

<i>Anopheles</i>	<i>Aedes</i>	<i>Culex</i>
111 ...	897 ...	4,316

*Sewage Disposal and Drainage.*—18 W.Cs. were installed and 4 septic tanks constructed.



*Scavenging.*—22,311 carts of refuse were removed.

*Infectious Diseases.*—No serious epidemic occurred but 140 cases of chicken-pox were notified.

*Inspection of Foodstuffs.*—The following were condemned: Maize 664 lb., fish 190 lb., rice 2,000 lb., muhogo 320 lb., milk 78 gallons, meat 86 lb.

*Housing.*—Every effort was made to ensure that new buildings were erected in accordance with existing rules. The following is a summary of the work done:—

Total number of building applications	307
Passed	235
Refused	63
Pending	8
Demolitions	13

#### PUBLIC HEALTH WORK IN RURAL AREAS

Trained Sanitary Inspectors were posted to the districts of Makunduchi and Mkokotoni in Zanzibar. These inspectors tour the villages and advise regarding maintenance of markets, refuse disposal, mosquito control, latrines, etc. They also give lectures at schools on the simpler aspects of Public Health.

#### SCHOOL MEDICAL AND DENTAL SERVICE

Owing to shortage of staff no regular school medical inspections were carried out during the year in Zanzibar. In Pemba the District Medical Officer examined the new entrants at the schools in Wete and Chake and Mkoani.

The school dental service was in abeyance owing to the absence of the Assistant Dental Surgeon.

#### AMBULANCE SERVICE

During the year 1,182 patients were collected from the rural districts of Zanzibar by ambulance. The total mileage run was 10,451 miles in Zanzibar and 2,810 miles in Pemba.

### SECTION IV.—PORT AND AERODROME HEALTH WORK, AND ADMINISTRATION

Five hundred and twenty-seven ships and 1,448 dhows called at Zanzibar and were boarded for inspection. No ships or dhows were placed in quarantine.

Two ships were treated with sulphur dioxide and 22 ships were granted deratisation exemption certificates after inspection.



## AIRFIELD

3,597 aircraft landed at Zanzibar airport during the year.

All passengers landing in Zanzibar from aircraft or ships are required to be in possession of valid vaccination certificates, and if coming from an endemic area yellow fever certificates as well.

## QUARANTINE STATION

Extensive repairs were carried out to the buildings, the equipment and furniture was overhauled.

## SECTION V.—MATERNITY AND CHILD WELFARE

Clinics for women and children were continued on both islands. In Zanzibar the Lady Assistant Medical Officer conducted the clinic at Zanzibar Hospital and visited the rural centres of Mkokotoni, Selem and Mwera once a week.

In Pemba clinics were held at Wete and Chake-Chake.

The following tables show the numbers attending the Women's Clinics during the past five years.

## MATERNITY AND CHILD WELFARE.

	1945		1946		1947		1948		1949	
	New cases	Re-Attendances	New cases	Re-Attendances	New cases	Re-Attendances	New cases	Re-Attendances	New cases	Re-Attendances
General cases	7,945	28,262	11,327	34,190	11,900	34,214	12,644	38,646	11,712	36,769
Ante-natal	326	838	415	1,112	485	1,599	396	1,338	423	1,151
Infant Welfare	232	...	283	940	248	1,125	364	1,036	362	790
Total ...	8,503	29,100	12,025	36,242	12,633	36,938	13,404	41,020	12,497	38,710
<i>Zanzibar Rural Clinics:</i>										
Mkokotoni	800	1,389	1,031	2,480	1,096	4,568	1,480	5,330	1,327	4,079
Mwera	289	1,446	277	1,064	244	1,037	855	2,658	742	2,410
Selim	490	2,319	533	2,508	688	3,035	594	1,617	236	693
Total ...	1,579	5,154	1,841	6,052	2,028	8,640	2,839	9,605	2,305	7,182
<i>Zanzibar Maternity Hospital:</i>										
Total confinements...	299		248		299		344		353	
<i>Pemba Wete Clinic:</i>										
Ante-natal cases	156	175	105	493	123	516	136	554	131	509
Infant Welfare	104	402	...	...	84	450	151	313	65	160
Total ...	260	577	105	493	207	966	287	867	196	669
<i>Pemba Chake Chake Clinic:</i>										
Out-patients	3,275	14,617	3,627	12,739	2,917	7,848	3,565	7,317	4,116	8,639
Ante-natal cases	66	397	90	499	62	129	68	223	70	256
Infant Welfare	82	1,275	214	1,571	224	749	224	1,049	139	651
Total ...	3,423	16,289	3,931	14,809	3,203	8,726	3,857	8,589	4,325	5,946
<i>Wete Maternity Hospital:</i>										
Total confinements...	96		74		68		109		95	
<i>Chake Chake Hospital:</i>										
Total confinements...	63		57		50		55		42	

## ANALYSIS OF MATERNITY CASES

*Maternity Hospital, Zanzibar*

Total confinements	...	...	...	353
Maternal deaths	...	...	...	6
Infant deaths	...	...	...	11
Premature deaths	...	...	...	13
Still born	...	...	...	14
Twins	...	...	...	8
Forceps deliveries	...	...	...	11
Cæsarian section	...	...	...	1
Retained placenta	...	...	...	3

*Wete*

Total confinements	...	...	...	95
Primipara	...	...	...	23
Multipara	...	...	...	72
Normal deliveries	...	...	...	80
Forceps deliveries	...	...	...	1
Abnormal presentation	...	...	...	7
Craniotomies	...	...	...	4
Maternal deaths	...	...	...	5
Infant deaths	...	...	...	1
Still births	...	...	...	13
Multiple pregnancy	...	...	...	2

*Chake Chake*

Total confinements	...	...	...	42
Primipara	...	...	...	17
Multipara	...	...	...	25
Normal deliveries	...	...	...	40
Forceps deliveries	...	...	...	2
Eclampsia	...	...	...	1
Maternal deaths	...	...	...	1
Infant deaths	...	...	...	1
Still births	...	...	...	4
Multiple pregnancy	...	...	...	2

## SECTION VI.—REPORT ON SPECIAL DEPARTMENTS

## EYE CLINIC

The Pathologist was in charge of the eye clinic during the year. He was absent on leave for five months.

The following are the figures for cases treated:—

News cases	...	...	...	3,879
Re-attendances	...	...	...	24,811
Vision testing (candidates for Government employment)	...	...	...	524
European cases	...	...	...	25
Total				29,239
Refraction for glasses	...	...	...	85
Operations, major	...	...	...	42
,, minor	...	...	...	43
Cases admitted to hospital	...	...	...	164



## LABORATORY

*Zanzibar*

During the first four months of the year the Pathologist acted as Senior Medical Officer, and then proceeded on leave, the routine work of the laboratory being carried on by the Senior Laboratory Assistant.

The accommodation in the laboratory was improved by taking over an adjacent room for use as a sterilizing room. Minor improvements were also carried out in the post-mortem room.

The work of the Laboratory is briefly summarised as follows:—

The total number of examinations made was 25,324			
Parasitological examinations	...	...	14,194
Bacteriological examinations	...	...	4,904
Serological examinations	...	...	2,008
Histological examinations	...	...	22
Medico-legal examinations	...	...	30
Post-mortem examinations	...	...	37
General (blood, bio-chemical, etc.)	...	...	4,116
Special (Aschein-Zondak and veterinary)	...	...	13
Total			25,324

*Malaria*

There was a considerable reduction in the number of positive blood films compared with previous years, no doubt on account of the drought.

	1947	1948	1949
P. falciparum	1,861	1,502	1,044
P. vivax	700	525	196
P. malariae	100	44	22
Undefined	339	198	145
	3,000	2,269	1,407

*Typhoid*

Positive blood cultures dropped to 6.5 per cent as compared with 46.7 per cent in 1948, when an infected ship arrived in the port.

Two isolations of *Bacterium paratyphosum A* were obtained but these also were from cases on board a ship, not local infections.

The demand from the hospital for the crude liver extract prepared in the Laboratory continues to increase and 123 litres were prepared as against 87 litres in 1948.

In addition 15 litres of sterile glucose in saline were prepared for the hospital, and a considerable volume of sterilisation was performed when their steriliser was out of action.

Sterile solutions were also prepared for use in the Eye Clinic.

*Pemba: Wete and Chake Chake*

The total number of examinations performed was:—

	<i>Wete</i>	<i>Chake</i>
Blood films ... ..	1,429	1,474
Stool and urine ... ..	1,658	1,521
Blood counts and hæmoglobin estimation ... ..	659	—
Smears, sputum, etc. ... ..	291	233
	<hr/> 4,037	<hr/> 3,228

## REPORT OF DENTAL SURGEON

The following is a summary of the work carried out by the Department during the year. It does not include patients treated in the hospital by the Dental Surgeon, e.g., fracture jaws, etc.

	<i>Attend- ances</i>	<i>Extrac- tions</i>	<i>Fill- ings</i>	<i>Scal- ings</i>
Officials and families ...	1,012	81	400	103
Native out-patients ...	5,864	6,085	—	—
Schools ... ..	18	24	9	—
Non-officials ... ..	503	58	197	58

*Pemba*

The Dental Surgeon visited Pemba Island three times during the year totalling 44 days in Pemba.

## MENTAL HOSPITAL

The mental patients were moved from Ziواني to their new quarters at Holmwood in March. The design and layout of the new mental hospital which conforms to modern standards was appreciated by patients and staff. An improved dietary scale was introduced during the year. Our next task will be to improve the quality of the staff, the majority of the existing staff are illiterate.

The following figures show the number of patients treated:—

Remaining on 31st December, 1948	...	85
Admitted ... ..	...	69
Discharged ... ..	...	33
Deaths ... ..	...	6
Remaining on 31st December, 1949	...	115

## WALEZO INSTITUTION

This institution which is under the control of the Sisters of the Roman Catholic Mission has accommodation for, (a) the old and infirm, (b) tubercular patients, (c) leprosy patients.

The following figures show the work done during 1949:—

*Poor House*

	<i>Pauper Infirmary</i>	<i>Tuberculosis Asylum</i>
Number remaining 31st December, 1948	...	154
Number admitted during 1949	...	179
Number discharged during 1949	...	82
Number died during 1949	...	95
Number remaining 31st December, 1949	...	156

*Leper Settlement*

Number remaining 31st December, 1948	...	47
Number admitted during 1949	...	13
Number discharged during 1949	...	5
Number died during 1949	...	3
Number remaining 31st December, 1949	...	52

*Tuberculosis Asylum*

Number remaining 31st December, 1948	...	10
Number admitted during 1949	...	47
Number discharged during 1949	...	17
Number died during 1949	...	29
Number remaining 31st December, 1949	...	11

## PRISONS

*Zanzibar.*—There were 937 new cases and 4,767 re-attendances at the Prison Infirmary during the year.

One hundred and seventy-three cases of malaria and 14 cases of amœbic dysentery were recorded. All new prisoners are medically examined and if necessary treated before being put to work.

The following is a summary of the work carried out:—

		<i>Number of persons admitted</i>	<i>Daily average in prisons</i>	<i>Daily average on sick list</i>
Zanzibar	...	1,161	244.99	21.82
Pemba	...	766	65.74	3.88

## SECTION VII.—FINANCE

*(a) Expenditure, Health Department*

				£
Personal Emoluments	...	...	...	51,497
Other Charges :				
General Stores	...	...	...	2,204
Drugs, Dental and Surgical Requisites	...	...	...	8,123
Maintenance of Patients	...	...	...	13,681
Sanitation Labour	...	...	...	2,640
Miscellaneous Services	...	...	...	8,461
Total	...	...	...	86,606

*(b) Expenditure, Municipality*

				£
Personal Emoluments	...	...	...	4,504
Other Charges :				
Equipment and Stores	...	...	...	238
Sanitation Labour	...	...	...	9,288
Total	...	...	...	14,030



(c) *Revenue*

	£
Hospital Fees and Sale of Drugs ... ..	2,661
Dental Fees ... ..	240
Contribution from dependencies towards Quarantine Station ... ..	1,512
Total ...	4,413

SECTION VIII.—LEGISLATION AFFECTING THE PUBLIC HEALTH  
ENACTED DURING THE YEAR

*Mental Hospital Decree, 1947:*

Appointment of Mental Hospital.

*The Public Health Decree, Cap. 60:*

The Public Health (Appointment of Cemetery (Singalese) Order,  
1949.

## TABLES I AND II.

## Return of Diseases and Deaths for the Year 1949

This table includes only those diseases which were diagnosed in hospitals under the charge of a medical officer or assistant medical officer.

DISEASES	Remaining in Hospital at end of Dec. 1948	Yearly Admissions	Total Cases Treated	Total Deaths	Remaining in Hospital on 31st Dec. 1949	All Cases including both In and Out Patients	Total Cases Treated in 1948
1. Enteric Group—							
(a) Typhoid fever ...	1	11	12	...	2	19	37
(b) Paratyphoid fever ...	...	...	...	...	...	...	...
2. Typhus fever ...	...	...	...	...	...	...	1
3. Relapsing fever ...	...	...	...	...	...	...	...
4. Undulant fever ...	...	...	...	...	...	...	...
5. Smallpox ...	...	...	...	...	...	...	...
6. Measles ...	2	7	9	...	...	59	213
7. Scarlet fever ...	...	...	...	...	...	...	...
8. Whooping cough ...	...	4	4	...	...	89	92
9. Diphtheria ...	...	5	5	2	1	8	5
10. Influenza—							
(a) With respiratory complications ...	...	1	1	...	...	37	1,454
(b) Without respiratory complications ...	...	5	5	...	...	370	138
11. Cholera ...	...	...	...	...	...	...	...
12. Dysentery—							
(a) Amoebic ...	2	60	62	2	...	106	89
(b) Bacillary ...	...	6	6	...	...	19	74
(c) Unclassified ...	1	11	12	...	...	41	88
13. Plague—							
(a) Bubonic ...	...	...	...	...	...	...	...
(b) Pneumonic ...	...	...	...	...	...	...	...
(c) Septicæmic ...	...	...	...	...	...	...	...
14. Acute poliomyelitis ...	...	...	...	...	...	...	...
15. Encephalitis lethargica ...	...	1	1	1	...	1	1
16. Cerebro-spinal fever ...	...	...	...	...	...	...	2
17. Rabies ...	...	...	...	...	...	...	...
18. Tetanus ...	...	9	9	7	1	12	18
19. Tuberculosis of the res- piratory system ...	4	106	110	16	8	250	232
20. Other tuberculous dis- eases ...	1	3	4	...	...	6	18
21. Leprosy ...	...	4	4	...	...	28	23
22. Venereal diseases—							
(a) Syphilis ...	...	53	53	...	3	577	568
(b) Gonorrhœa ...	3	114	117	...	4	843	1,264
(c) Other venereal dis- eases ...	...	8	8	...	...	23	69
23. Yellow fever ...	...	...	...	...	...	...	...
24. Malaria—							
(a) Benign tertian ...	1	16	17	...	...	1,656	352
(b) Subtertian ...	5	307	312	11	7	2,431	1,903
(c) Quartan ...	...	...	...	...	...	8	32
(d) Unclassified ...	5	250	255	1	5	4,127	9,455
25. Blackwater fever ...	1	1	2	...	...	3	6
26. Kala-azar ...	...	...	...	...	...	...	...
27. Trypanosomiasis ...	...	...	...	...	...	...	...
28. Yaws ...	1	62	63	...	5	3,953	3,608
29. Other protozoal diseases ...	...	4	4	...	...	4	2
30. Ancylostomiasis ...	6	143	149	7	5	5,354	5,575
31. Schistosomiasis ...	1	28	29	1	...	718	569
32. Other helminthic diseases ...	...	3	3	...	1	50	69
Carried forward ...	34	1,222	1,256	48	42	20,792	25,957

TABLES I AND II.—(Contd.)

DISEASES	Remaining in Hospital at end of Dec. 1948	Yearly Admissions	Total Cases Treated	Total Deaths	Remaining in Hospital on 31st Dec. 1949	All Cases including both In and Out Patients	Total Cases Treated in 1948
Brought forward ...	34	1,222	1,256	48	42	20,792	25,957
33. Other infectious and/or parasitic diseases ...	1	270	271	4	14	660	411
34. Cancer and other tumours							
(a) Malignant ...	...	18	18	2	1	27	42
(b) Non-malignant ...	1	27	28	2	...	96	132
(c) Undetermined ...	...	6	6	...	...	14	6
35. Rheumatic conditions ...	...	14	14	...	...	489	427
36. Diabetes ...	...	31	31	...	2	73	60
37. Scurvy ...	...	...	...	...	...	...	...
38. Beri-beri ...	...	2	2	...	...	3	4
39. Pellagra ...	...	1	1	...	...	2	3
40. Other diseases —							
(a) Nutritional ...	2	49	51	12	1	298	652
(b) Endocrine glands and general ...	...	27	27	...	...	168	361
41. Diseases of the blood and blood forming organs ...	4	124	128	26	2	1,568	1,232
42. Acute and chronic poisoning ...	...	8	8	...	...	8	...
43. Cerebral hæmorrhage ...	...	9	9	1	...	10	2
44. Other diseases of the nervous system ...	4	48	52	10	2	570	671
45. Trachoma ...	1	2	3	...	...	16	37
46. Other diseases of the eye and annexa ...	4	250	254	1	5	4,861	4,245
47. Diseases of the ear and mastoid sinus ...	...	33	33	...	1	1,091	1,182
48. Diseases of the circulatory system—							
(a) Heart diseases ...	4	72	76	30	5	423	131
(b) Other circulatory diseases ...	...	34	34	7	2	100	139
49. Bronchitis ...	9	87	96	3	2	3,457	3,189
50. Pneumonia—							
(a) Broncho-pneumonia ...	3	58	61	6	1	143	137
(b) Lobar-pneumonia ...	10	374	384	39	14	525	699
(c) Otherwise defined ...	...	23	23	2	1	28	73
51. Other diseases of the respiratory system ...	4	117	121	7	6	4,489	6,263
52. Diarrhoea and enteritis—							
(a) Under two years of age ...	...	6	6	...	...	95	115
(b) Over two years of age ...	1	50	51	2	1	588	687
53. Appendicitis ...	...	13	13	...	1	24	12
54. Hernia and intestinal obstruction ...	11	229	240	21	11	572	762
55. Cirrhosis of the liver ...	1	9	10	3	...	22	10
56. Other diseases of the liver and biliary passages ...	1	34	35	5	2	115	93
57. Other diseases of the digestive system ...	3	217	220	1	5	10,310	10,085
58. Nephritis (all forms)—							
(a) Acute ...	...	1	1	...	1	1	9
(b) Chronic ...	...	8	8	4	...	14	32
Carried forward ...	98	3,473	3,571	236	122	51,652	57,860



TABLES I AND II.—(Contd.)

DISEASES	Remaining in Hospital at end of Dec., 1948	Yearly Admissions	Total Cases Treated	Total Deaths	Remaining in Hospital on 31st Dec. 1949	All Cases including both In and Out Patients	Total Cases Treated in 1948
Brought forward ...	98	3,473	3,571	236	122	51,652	57,860
59. Other non-venereal diseases of the genito-urinary system ...	5	333	338	9	12	2,678	1,873
60. Diseases of pregnancy, childbirth and the puerperal state—	...	...	...	...	...	...	...
(a) Abortion ...	2	57	59	...	1	102	103
(b) Ectopic gestation ...	...	3	3	...	...	160	1
(c) Toxæmias of pregnancy ...	...	49	49	4	...	68	156
(d) Other conditions of the puerperal state...	2	152	154	10	1	163	196
61. Diseases of the skin, cellular tissue, bones and organs of locomotion ...	89	1,155	1,244	21	58	17,042	20,418
62. Congenital malformations and diseases of early infancy—							
(a) Congenital debility (children under 1 yr.)	..	2	2	...	...	11	13
(b) Premature birth ...	...	1	1	1	...	1	1
(c) Injury at birth ...	...	...	...	...	...	...	...
(d) Others ...	...	...	...	...	1	2	2
63. Senility ...	...	25	25	12	...	163	233
64. External causes—							
(a) Suicide ...	...	...	...	...	...	...	...
(b) Other forms of violence ...	24	466	490	13	51	5,900	7,851
65. Ill-defined causes ...	22	177	199	12	2	2,991	1,222
66. Ante-natal and child welfare consultations ...	...	335	335	...	...	1,327	1,609
Total ...	242	6,228	6,470	318	248	82,260	91,538